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Digital Video Display System

A system has been developed for displaying image data in real time on a 120,000-element raster scan with 2, 4, or 8 shades of grey. Designed specifically for displaying planetary range Doppler data, the system can also be used for X-Y plotting, displaying alphanumerics, and providing image animation. All operating modes have on-line computation capabilities for altering data point-by-point; the display can also be used to monitor the effect produced by the alteration of algorithms in the processing of data.

The system consists basically of a digital computer interface, a data handler, an oscilloscope interface, a large-screen oscilloscope, and appropriate software. The following characteristics have been demonstrated: (1) A radar albedo map can be displayed in approximately 1/40 second; this is in contrast with the time required for construction of a map by prior-art methods (one week). (2) Observations can be made of a plot or curve as it is being developed point-by-point. (3) Writing speed is 3000 lines of 40 characters per minute; 600 alphanumeric characters can be displayed in four symbol sizes.

Details of human response factors, data multiplexing, data display, system hardware, and system programming are available in a summary report.

Note:

Requests for further information may be directed to:

Technology Utilization Officer
NASA Pasadena Office
4800 Oak Grove Drive
Pasadena, California 91103
Reference: TSP 73-10132

Patent status:

This invention has been patented by NASA (U.S. Patent No. 3,648,250). Inquiries concerning nonexclusive or exclusive license for its commercial development should be addressed to:

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